

**Amendments to the Claims:**

Please amend as follows:

- Claim 1 (Currently Amended) A method for detecting cyclin dependent kinase 5 (Cdk5) serine kinase activity in a biological sample, which method comprises determining whether Disabled 1 protein (Dab1) in said sample is phosphorylated on a serine ~~within a candidate sequence preferred by Cdk5 activity selected from the group consisting of a serine corresponding to position 491 of SEQ ID NO:4 and a serine corresponding to position 515 of SEQ ID NO:4~~, wherein phosphorylation of Dab1 on said serine indicates the presence of active Cdk5 in said sample.
- Claim 2 (Currently Amended) The method of claim 1 wherein said Dab1 is a murine Dab1 ~~having the sequence set forth in SEQ ID NO:4, and wherein the candidate sequence is included within the Dab1 amino acids selected from the group consisting of SEQ ID NO:1 and SEQ ID NO:2~~.
- Claim 3 (Canceled)
- Claim 4 (Currently Amended) The method of claim 1 wherein said biological sample is ~~derived isolated~~ from an organism selected from the group consisting of mouse and human.
- Claim 5 (Currently Amended) The method of claim 1 wherein said biological sample is ~~derived isolated~~ from the group consisting of brain and blood.
- Claim 6 (Currently Amended) The method of claim 1 wherein said biological sample is ~~derived isolated~~ from a cell culture.
- Claim 7 (Original) The method of claim 1 wherein said Dab1 phosphorylation occurs *in vivo*.
- Claim 8 (Currently Amended) The method of claim 1 which comprises immunoprecipitating said Dab1 from said biological sample prior to said determining step using an antibody that binds to Dab1 phosphorylated and unphosphorylated on said serine Dab1.
- Claim 9 (Canceled)

- Claim 10 (Previously Presented) The method of claim 1 wherein Dab1 phosphorylation is determined using an antibody that binds to Dab1 only when it is phosphorylated on said serine.
- Claim 11 (Previously Presented) The method of claim 10 wherein said antibody is raised against the polypeptide fragment TPAPRQSS(PO<sub>4</sub>)PSKSSA (SEQ ID NO:3 which contains a phosphate group on the 8<sup>th</sup> amino acid).
- Claim 12 (Canceled)
- Claim 13 (Original) The method of claim 10 wherein said antibody is polyclonal.
- Claim 14 (Original) The method of claim 10 wherein said antibody is monoclonal.
- Claim 15 (Original) The method of claim 10 wherein Dab1 phosphorylation is determined by using techniques consisting of radioimmunoassay, ELISA, "sandwich" immunoassays, immunoradiometric assays, gel diffusion precipitation reactions, immunodiffusion assays, in situ immunoassays, western blots, precipitation reactions, agglutination assays, complement fixation assays, immunofluorescence assays, protein A assays, immunoelectrophoresis assays, mass spectrometry and antibody array.
- Claims 16-31 (Canceled)
- Claim 32 (Currently Amended) A method for detecting cyclin dependent kinase 5 (Cdk5) serine kinase activity in from a biological sample, which method comprises immunoprecipitation of mouse Dab1 having GenBank accession number 1771281 the sequence set forth in SEQ ID NO:4 from said a biological sample with or without Cdk5; contacting the immunoprecipitated Dab1 with a phosphoantibody generated using SEQ ID NO:3 having a phosphorylated serine at position 8 of SEQ ID NO:3 as an antigen; detecting binding of the phosphoantibody to serine 491 of said Dab1, wherein increased binding of the phosphoantibody to serine 491 of said Dab1 in such biological sample with Cdk5 as compared to a sample without Cdk5 indicates the presence of Cdk5 serine kinase activity in said sample.

Claim 33 (New) A method for detecting cyclin dependent kinase 5 (Cdk5) serine kinase activity in a biological sample, which method comprises determining whether Disabled 1 protein (Dab1) in said sample is phosphorylated on a serine selected from the group consisting of a serine corresponding to position 491 of the amino acid sequence encoded by the nucleotide sequence of GenBank Accession number 1771281 and a serine corresponding to position 515 of the amino acid sequence encoded by the nucleotide sequence of GenBank Accession number 1771281, wherein phosphorylation of Dab1 on said serine indicates the presence of active Cdk5 in said sample.